State of California

AIR RESOURCES BOARD

PROCEDURES FOR EXEMPTION OF ADD-ON AND MODIFIED PARTS FOR OFF-ROAD CATEGORIES

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AIR RESOURCES BOARD

PROCEDURES FOR EXEMPTION OF ADD-ON AND MODIFIED PARTS FOR OFF-ROAD VEHICLES/ENGINES/EQUIPMENT

I. APPLICABILITY

These criteria apply to add-on or modified parts that are emission related, as defined in Sections 1900 (b), (1) and (10), Chapter 3, Title 13, California Code of Regulations (CCR). Examples of emission related parts for on-road vehicles are shown in Appendix B of these procedures. Such parts require an exemption from the prohibitions of Sections 27156 and 38391 of the California Vehicle Code (VC) or 13 CCR, Section 2472 in order to be legally advertised, offered for sale, sold, or installed in California. The Executive Officer shall grant an exemption from VC 27156 and VC 38391 or 13 CCR, Section 2472 for parts that satisfy the criteria specified in these procedures.

These procedures do not affect the provisions of Title 13, CCR Sections 2403(g), 2412(g), 2423(e), and 2433(e).

II. APPLICATION FOR EXEMPTION BY THE BOARD FROM THE PROHIBITIONS OF SECTIONS 27156 AND 38391 OF THE CALIFORNIA VEHICLE CODE OR 13 CCR, SECTION 2472.

The manufacturer of an add-on or modified part shall file an application for exemption for each generic category, as defined in Paragraph III.D of these procedures. The application shall be in writing, and must be signed by a person authorized to act on behalf of the manufacturer.

An applicant shall provide the information required in the application form in Appendix A of these procedures. In addition to the application, the Executive Officer shall require an applicant to submit other design or technical information, photographs, and a sample of the part, if the information submitted in the application does not permit a proper evaluation of the add-on or modified part. Upon request of an applicant, the Executive Officer shall return any sample part within 30 days after the exemption request is either granted, denied, or withdrawn.

III. EMISSION TESTING REQUIRED BY THE EXECUTIVE OFFICER

A. Vehicle/Engine/Equipment Selection

The Executive Officer shall require an applicant to conduct emission testing in accordance with Paragraphs IV.E.,V, and VI of these procedures unless the Executive Officer determines, based upon a review of available information, that the part for which an exemption is sought meets the

standards and requirements set forth in these procedures, and does not significantly affect emissions. Upon request by the applicant, the Executive Officer shall provide a list of test vehicles/engines/equipment, including alternates. When selecting test vehicles/engines/equipment, the Executive Officer shall consider the worst case and/or the most popular configurations, as defined in Paragraph III.E.2 of these procedures. The number of vehicles/engines/equipment to be tested is specified in Paragraph III.E of this section. Manufacturers are advised to consult with the Air Resources Board staff before conducting any testing in support of an exemption application.

B. Test Laboratory

The applicant shall have any required testing performed at a laboratory properly equipped to conduct such tests. The test vehicle(s)/engine(s)/equipment shall be under the control of the laboratory for the entire test period and shall not be returned until the completion of the test period.

C. Additional or Alternate Testing

If the Executive Officer finds that the emission testing specified in Paragraphs IV.E, V, and VI of these procedures is not adequate to characterize the emissions performance or durability of an add-on or modified part, the Executive Officer shall require alternate emission testing (including monitoring of toxic emissions or "off-cycle" testing) and/or functional and bench testing. If the Executive Officer requires such additional or alternate testing, the Executive Officer shall notify the applicant of the requirement prior to the start of any other required testing and shall provide the applicant with reasons or justification for imposing the alternate or additional requirements. The Air Resources Board may conduct confirmatory tests at the option of the Executive Officer. Confirmatory tests, if required, shall be performed by ARB within 30 days of the receipt of all data, materials, and vehicles necessary for conducting the tests. The results of ARB confirmatory tests shall be reported to the applicant within 20 days of completion of all ARB testing. The applicant shall be given the opportunity to observe the confirmatory tests. The confirmatory testing conducted by the Air Resources Board shall utilize the same procedure and test type as that used by the applicant.

D. Categorization of Parts - Generic Categories

Any add-on or modified part will be categorized according to its "Generic Category". For example, the term "intake manifold" shall define the entire generic category for this part. Generic categories shall include:

Turbochargers
Superchargers
Intercoolers
Carburetors

Fuel Injection Systems
Intake Manifolds
Ignition Systems (excluding Distributors)
Ignition Distributors
Electronic Control Units
Camshafts
Other Internal Engine Components
Evaporative Control System
Positive Crankcase Ventilation System
Exhaust Gas Recirculation System
Air Injection System
Fuel Filler Necks with Restrictions
Thermal Reactors
Exhaust Systems

For other components which in any way can affect emissions, applicants should check with the Executive Officer for a determination of the appropriate breadth of the generic category.

E. Number and Type of Test Vehicles/Engines/Equipment Required

1) When required by the Executive Officer, add-on or modified parts shall be emission tested using the test procedures specified in Paragraphs IV.E, V, and VI of these procedures, as applicable.

2) The required number and type of test vehicles/engines/equipment is the same for each test procedure specified in paragraphs IV.E, V, and VI of these procedures. The test vehicle/engine/equipment types will be the "worst case" and/or "most popular" as determined by the Executive Officer. Selection of a "most popular" test vehicle/engine/equipment shall be based on the configuration with the highest projected sales volume of the add-on or modified part. Selection of a "worst case" test vehicle/engine/equipment shall be based on the engine displacement and vehicle/engine/equipment test weight which produce the greatest stress on the emission related components. When the Executive Officer finds that a "worst case" vehicle/engine/equipment cannot be obtained with a reasonable effort or cost to the applicant, one with the same engine displacement but different test weight may be substituted. When the Executive Officer makes such a finding, the substitute vehicle/engine/equipment may be emission tested at the same test weight and road load horsepower as that of the "worst case" vehicle/engine/equipment. If the applicant elects to test the substitute vehicle/engine/equipment at a test weight less than that of the "worst case", the Executive Officer shall restrict the exemption for the add-on or modified part to vehicles/engines/equipment with the lower weight, unless the Executive Officer determines that the lower weight adequately represents the heavier vehicle/engine/equipment

substituted for in all ways related to emissions. The number of vehicles/engines/equipment the applicant will be required to emission test depends on the application and is provided herein.

a) Universal Vehicle/Engine/Equipment Application Type:

Refers to the generic categories in which the add-on or modified part exemption application applies to the product line of four or more vehicle/engine/equipment manufacturers. In such cases the applicant shall be required to emission test a maximum of four different model vehicles, engines, or equipment for each application category.

b) Less Than Universal Vehicle/Engine/Equipment Application Type:

Refers to the generic categories in which the add-on or modified part exemption application applies to the product line of two or three vehicle/engine/equipment manufacturers. In such cases the applicant shall be required to emission test a number of vehicles, engines, or equipment equal to or less than the number of applicable manufacturers for each application category.

c) Single Manufacturer Vehicle/Engine/Equipment Application Type:

Refers to the generic categories in which the add-on or modified part exemption application only applies to one vehicle/engine/equipment manufacturer. In such cases the applicant may be required to emission test no more than one vehicle/engine/equipment for each application category.

IV. EVALUATION CRITERIA

A. Basis of Emissions Evaluation

The Executive Officer shall review the applicant's emission test data and the Air Resources Board test results, if any, to determine if the add-on or modified part increases emissions. In the absence of certification emission test data, the Executive Officer shall use good engineering judgment and the results of any functional, emission test results from similar parts in making the determination regarding the effect of the add-on or modified part on emissions.

B. Resolution of Discrepancies

In the event of discrepancies between the Air Resources Board test results and the applicant's test results, the Executive Officer's evaluation may be based solely on the Air Resources Board test results. The Executive Officer shall inform the applicant of any such discrepancies, and shall

endeavor to resolve the conflict between the test results. If the conflict cannot be resolved, the Executive Officer shall inform the applicant that there are still discrepancies and that the Air Resources Board test results will be used.

C. Performance and Driveability

The Executive Officer shall use good engineering judgment to evaluate the effects of the add-on or modified part on the vehicle's/engine's/equipment's driveability or performance. If the Executive Officer determines that the add-on or modified part degrades a vehicle's/engine's/equipment's driveability or performance such that owners may be encouraged to adjust the engine settings or tamper with required emission control systems to improve driveability or performance, the Executive Officer may find that the add-on or modified part will increase emissions.

D. Durability

If the Executive Officer has reason to believe, on the basis of an engineering evaluation, that an add-on or modified part will adversely affect the durability of the vehicle/engine/equipment emission control system, or that in the past the part did not demonstrate durability equivalent to the part or system replaced or added to, the Executive Officer shall find that the modification will increase emissions. In such cases the applicant shall be required to submit data in order to show that the vehicle/engine/equipment emission control system is not adversely affected, and/or that the add-on or modified part has demonstrated adequate durability.

E. Specific Evaluation Criteria Parts Subject to Emission Testing

When the Executive Officer requires an add-on or modified parts manufacturer to perform emission testing, the applicant shall demonstrate compliance with the requirements of these test procedures using the procedures contained herein.

1) Determination of Baseline Emissions

The applicant shall submit a list of vehicles/engines/equipment for which the add-on or modified part may be applied to, before commencing testing. The ARB shall inform the applicant as to which vehicle/engine/equipment may need to be tested. An applicant may be required to test more than one vehicle/engine/equipment.

The applicant shall select a functional vehicle/engine/equipment. A functional vehicle/engine/equipment is one that complies with the original certification standard. The baseline emissions of the test vehicles/engines/equipment without the add-on or modified part (s) shall be determined using the appropriate test procedures specified in paragraphs V and VI of these procedures.

2) Emissions Testing

Emissions testing performed pursuant to these test procedures shall be conducted by an exhaust emissions test laboratory.

V. OFF-ROAD CATEGORIES

Applicants shall utilize the appropriate test procedure for their vehicle/engine/equipment category, as defined in this section.

The test vehicle/engine/equipment shall be operated for the appropriate break-in period, as specified in the applicable exhaust emissions test procedures before commencing testing. Break-in periods for each off-road category are specified in the test procedures referenced below. The baseline emissions without the add-on or modified part shall be determined prior to testing, but after stabilization of the vehicle/engine/equipment. Following the addition of the add-on or modified part, the test vehicle/engine/equipment shall be tested to ensure that the original certification standards are met. For the purposes of these procedures, off-road vehicles/engines/equipment are categorized as follows:

A. Small Off-Road Engines

Small Off-Road Engines include all engines that produce, or are designed to produce, less than 25 horsepower (hp), manufactured on or after January 1, 1995, and used in off-road mobile applications, with the exceptions of off-road motorcycles, all-terrain vehicles, marine vessels, snowmobiles, model airplanes, model cars, or model boats.

B. Off-Road Diesel Engines and Equipment

The heavy-duty off-road diesel cycle engine and equipment category consists of off-road diesel-cycle engines that are:

(1) greater than or equal to 50 hp and less than 100 hp manufactured on or after January 1, 1998, and certified to meet the federal emission standards and certification provisions;

(2) greater than or equal to 100 hp and less than 175 hp manufactured on or after January 1, 1997, and certified to meet the federal emission standards and certification provisions; and

(3) diesel cycle and alternative fueled diesel cycle engines equal to 175 hp and above for off-road engines produced on or after January 1, 1996, and certified to meet California's exhaust emission standards and test procedures. This last category includes engines used in farm and construction equipment, as well as mining, forestry, and industrial equipment.

C. Off-Highway Recreational Vehicles and Engines

The off-highway recreational vehicle category includes new off-highway recreational vehicles and engines in such vehicles, produced on or after January 1, 1997. This category includes off-road motorcycles, all-terrain vehicles, and golf carts. New golf carts used in areas that do not meet the federal ozone standards will continue to have a zero-emission requirement.

D. Spark-Ignition Marine Engines

The spark-ignition marine engine category includes 2001 and subsequent model year engines used to propel marine watercraft, but not including sterndrive or inboard engines.

E. Off-Road Large Spark-Ignition Engines

The off-road large spark-ignition engine category includes engines that produce, or are designed to produce 25 and greater horsepower, and that are produced on or after January 1, 2001. Such engines are typically used to power forklift trucks, sweepers, generators, industrial equipment and other miscellaneous applications.

VI. TEST PROCEDURES AND STANDARDS

A. Test Procedures

1) Test Procedures for Small Off-Road Engines

"California Exhaust Emission Standards and Test Procedures for 1995 and Later Small Off-Road Engines," adopted March 20, 1992 and last amended March 23, 1999, which is incorporated by reference herein. (These procedures are also incorporated by reference by Title 13, California Code of Regulations (CCR) Section 2403.)

2) Test Procedures for Off-Road Diesel Engines and Equipment

i) For 175 horsepower and greater:

"California Exhaust Emission Standards and Test Procedures for New 1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines,"adopted May 12, 1993, which is incorporated by reference herein, and "California Smoke Test Procedures for New 1996 and later Heavy-Duty Off-Road Diesel Cycle Engines," adopted May 12, 1993, which is incorporated by reference herein. (These procedures are also incorporated by reference by 13, CCR Section 2423).

ii) For greater than or equal to 50 horsepower and less than 175 horsepower:

The exhaust emission standards and test procedures specified in Appendix C of these procedures, which is incorporated by reference herein.

3) Test Procedures for Off-Highway Recreational Vehicles and Engines

i) For new off-road motorcycles, all-terrain vehicles, and golf carts:

"California Exhaust Emissions Standards and Test Procedures for 1997 and Later Off-Highway Recreational Vehicles and Engines," adopted November 23, 1994, and as last amended October 22, 1999, which is incorporated by reference herein. (These procedures are also incorporated by reference by Title 13, CCR Section 2412).

ii) For all-terrain vehicle engines

"California Exhaust Emission Standards and Tests Procedures for 1995 and Later Small Off-Road Engines," adopted March 20, 1992, and last amended March 23, 1999,which is incorporated by reference herein. (These procedures are also incorporated by reference by Title 13, CCR Section 2412).

4) Test Procedures for Spark-Ignition Marine Engines

"California Exhaust Emission Standards and Test Procedures for 2001 and Later Spark-Ignition Marine Engines" adopted October 21, 1999, which is incorporated by reference herein. (These procedures are also incorporated by reference by Title 13, CCR Section 2442).

5) Test Procedures for Off-Road Large Spark-Ignition (LSI) Engines

i) For new off-road LSI engines with engine displacement greater than 1.0 liter

"California Exhaust Emission Standards and Test Procedures for New 2001 and Later Off-Road Large Spark-ignition Engines," adopted September 1, 1999, which is incorporated by reference herein. (These procedures are also incorporated by reference by Title 13, CCR Section 2433).

ii) For new off-road LSI engines with engine displacement equal to or less than 1.0 liter

"California Exhaust Emission Standards and Test Procedures for 1995 and Later Small Off-Road Engines," as last amended March 23, 1999, which is incorporated by reference herein. (These procedures are also incorporated by reference by Title 13, CCR Section 2433).

6) Alternative Test Plan

An applicant may use an alternative test procedure subject to prior approval by the Executive Officer. An applicant requesting the use of an alternative test procedure must fully describe the proposed test procedure and submit information that demonstrates the proposed procedure will yield results equivalent to those generated by the applicable standard test procedures.

The Executive Officer may reject data generated under alternative test procedures which do not correlate with data generated under the specified procedures.

B. Vehicle/Engine/Equipment Exhaust Emission Standards

1) 2000 and later model-year small off-road engines

To demonstrate compliance with the applicable emission standards, each emission test result shall be adjusted by the application of the certification deterioration factor provided in the original engine manufacturer's certification application for the model and model year of the test engine. The deteriorated emission test results shall be in compliance with these procedures only if they are equal to or less than the California new engine exhaust emission standards. The applicant shall be permitted one retest if the initial emission test results fail to demonstrate compliance with these procedures. The results of the initial test and the retest will be averaged, and the averaged result must comply with the standards set for the single test in order to demonstrate compliance.

2) All other off-road categories:

The add-on or modified part manufacturer shall demonstrate compliance with these procedures by showing that the exhaust emissions from the test vehicle/engine/equipment with the add-on or modified part installed are in compliance with the applicable exhaust emission standards for the class and model year of the test vehicle/engine/equipment.

3) Vehicles/Engines/Equipment certified under optional averaging banking, and trading provisions

For purposes of these procedures the applicable emission standards for vehicles/engines/equipment certified under optional averaging, banking, and trading provisions shall be the family emission limit (FEL) that the vehicle/engine/equipment is certified to.

VII. ACTION ON THE APPLICATION

A. Application Evaluation

The Air Resources Board staff will initially evaluate the application, the test data, and any other pertinent information concerning the add-on or modified part. On the basis of the information provided by the applicant and/or the Air Resources Board test results, the staff will make a recommendation to the Executive Officer. If the Executive Officer determines that an add-on or modified part will not reduce the effectiveness of the emission control system or result in emissions that exceed the applicable emission standards for each vehicle/engine/equipment, he or she shall issue an Executive Order exempting the add-on or modified part from the prohibitions of VC Sections 27156 and 38391 or 13 CCR, Section 2472. This Executive Order may restrict the installation of the add-on or modified parts certified by engineering evaluation to certain makes, model-years, or classes of vehicles/engines/equipment. As a condition of exemption the applicant shall not use the Executive Order as an endorsement or approval by the Air Resources Board.

The Executive Officer shall deny the applicant's exemption request if the add-on or modified part increases emissions more than allowed under the Evaluation Criteria of section VI of these procedures. If the Executive Officer denies the applicant's exemption request, the Executive Officer shall convey by letter notice of and the reasons for denial.

B. Labeling Requirements

The add-on or modified part manufacturer shall provide a product information label and complete instructions for its installation in a location readily visible to the average person with each part or kit of parts sold. The product information label shall contain, at a minimum, the product name as exempted, ARB executive order number using the format "CARB D-O-XXX," manufacturer's name, and the manufacturer's address. The product information label shall be designed for a minimum life of five years.

If the installation of an add-on or modified part requires the removal of any emission control component, re-routing of any vacuum hose, or changes to the vehicle manufacturer tune-up specifications, the add-on or modified part manufacturer must provide two identical product information labels. These product information labels shall, in addition to the information specified in the immediately preceding paragraph, provide a complete description of the required changes

and the new tune-up specifications. One product information label will be installed either on or near the add-on or modified part, in a location readily visible to the average person. The other product information label will be installed adjacent to, but not covering, the vehicle/engine/equipment manufacturer's Vehicle Emission Control Information (tune-up) label or Important Engine Information Label.

The add-on or modified part manufacturer shall submit a facsimile or prototype of the product information label and the installation instructions with each application for exemption.

VIII. WARRANTY REQUIREMENTS

The manufacturer of an add-on or modified part will warrant to the ultimate purchaser and to each subsequent purchaser that the add-on or modified part is designed and manufactured to conform with the applicable requirements of these Procedures and is free from defects in materials and workmanship which may cause the add-on or modified part to fail to conform with the applicable requirements of these Procedures or cause damage to any other part on the modified vehicle/engine/equipment.

This warranty shall cover customer service, and shall cover the full repair and replacement costs including the costs of diagnosis, labor, and parts (including any part on the modified vehicle/engine/equipment that is damaged due to a defect in the add-on or modified part).